REMARKS

Claims 3 - 16 are currently pending in the application and are presented for reconsideration and reexamination in view of the following remarks.

In the outstanding Office Action, claims 3 - 16 were rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,248,420 to Brandt et al.

By this Amendment, claims 3 -5 are amended and the prior art rejection is traversed. Support for the amendments to claim 3 can be found for example on page 9, paragraphs beginning on line 4 and 26. Claims 4 and 5 have been amended to add a colon after "comprising." Arguments in support thereof are provided.

It is respectfully submitted that the above amendments introduce no new matter within the meaning of 37 U.S.C. § 132.

Rejection under 35 U.S.C. § 102(b)/103(a)

The Examiner rejected claims 3 - 16 as being anticipated by or, in the alternative as unpatentable over Brandt et al.

Response

Reconsideration and withdrawal of the rejection is respectfully requested.

For a reference to anticipate an invention, all of the elements of the claimed invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claims is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. V. Union Oil Co. of California,* 2 USPQ2d 1051, 1053 (Fed. Cir. 1987. The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.,* 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must also be arranged as required by the claim. *In re Bond,* 15 USPQ2d 1566 (Fed. Cir. 1990).

To establish a *prima facie* case of obviousness, the Examiner must establish: (1) that some suggestion or motivation to modify the references exists; (2) a reasonable expectation of success; and (3) that the prior art references teach or suggest all the claim limitations. Amgen, Inc. v. Chugai Pharm. Co., 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); In re Fine, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970).

It is respectfully submitted that the combination of references fails to disclose each and every element of the claims, and in the alternative, teach or suggest all the claim limitations.

According to the mineral wool product of the present invention, trailing pulley sets 26 of rotary members 15/16, 18/19 and 20/21 are arranged downstream of the axes of rotation of leading belt pulleys 25 of the rotary members 18/19, 20/21 and 22/23 in the running direction 14, so as to give rise in each case to an overlap zone 27. In each case, the leading belts engage between the set of trailing belts or rotary members, so that, in these overlap regions 27, the mineral wool web 12 is

guided both by the set of leading belt-like rotary members 15/16, 18/19 and 20/21 and, at the same time, by the trailing belt-like rotary members 18/19, 20/21 and 22/23. See page 7, paragraph beginning on line 13.

A feature of the procedure according to the invention is that, in the overlap region 27, the sets of belts or rotary members rotating at different speeds, in spite of their different rotational speed, act simultaneously on the mineral wool web 12 in the width zones corresponding to their respective width. As a result, at least the surface material of the mineral wool web 12, in the longitudinal zones corresponding to the leading belts, is led into the overlap region 27 and through this at undiminished speed, whilst the trailing belts engage into the gaps between the leading belts, the said trailing belts rotating at lower speed and braking the material. This results in a wavy warping of the material of the mineral wool web 12, as indicated by dot-and-dashed lines in FIG. 2. See page 8, paragraph beginning on line 20.

Due to the extent of wavy compaction in the overlap region 27, it is thus possible, over and above mere upsetting effects, to take action on the material of the mineral wool web 12 which, particularly in the case of small thicknesses of the mineral wool web 12, leads preferably to fulling, warping and felting effects. See page 9, paragraph beginning on line 4.

The longer the overlap region 27 is, the more intensive is the fulling and warping action on the material. Lengths of overlap regions which are suitable in this respect are up to 500 mm, preferably around 150 to 300 mm, in particular of the order of magnitude of 200 mm. See page 9, paragraph beginning on line 26.

Brandt et al. discloses method of producing a mineral fiber-insulating web, a plant for producing a mineral fiber-insulating web, and a mineral fiber-insulated plate. A first material fiber web contains mineral fibers arranged generally in the longitudinal direction of a mineral fiber web. Secondly, the first material fiber web is moved in the longitudinal direction of the web and folded transversely relative to the longitudinal direction and parallel with a transversal direction of the first mineral fiber web, so as to produce a second mineral fiber-web containing mineral fibers arranged generally perpendicular to the longitudinal and transversal directions. Thereupon, the folded mineral fiber web is cured for bonding the mineral fibers together so as to produce the mineral fiber-insulating web comprising a central body containing mineral fibers arranged generally perpendicular to the longitudinal direction of the mineral fiber web.

It appears that the main object of the reference is to provide an insulating plate that contains less mineral fibres and is less costly to produce but has advantages as compared with known insulating plates. See Summary of the Invention.

Further, the structure in Brandt et al. improves mechanical properties (e.g. pressure resistance) of a main layer (i.e. main body) of the mineral fibre insulating plate and thus provides insulating plates having an improved mechanical stability. In addition, the covering layer (i.e. the surface layer) used to improve mechanical strength neither comprises reoriented fibres nor are arranged in a wavy manner as recited in independent claim 3, but instead consists of highly compressed fibre material. See Summary of the Invention in Brandt et al.

In contrast thereto, the mineral wool product of the present application comprises fibres arranged in a wavy manner, wherein the mineral wool product is used to build a covering layer or an

inner layer. In addition, the mineral wool product as claimed in claim 3 is applicable to be used in connection with various different main layers to build various applications, not only insulating plates. See Figure 3. This possibility is not provided in Brandt et al.

There is no discussion any where in the Brandt et al. reference of felting, warping, and pressing of the mineral fibres or lengths of folded regions (overlap regions) up to 500 mm as recited in claim 3. As discussed in the present invention, the longer the overlap region 27 is, the more intensive is the fulling and warping action on the material.

Further, this feature allows building of a relatively thin board, having high density wherein this board is resilient to tensile, flexural and upsetting loads and, while having considerable stiffness, neither tears nor easily nicks or bulges, which has not been possible before.

Still further, Brandt also does not disclose that the fibre alignment of the mineral wool product is reoriented in relation to the depositing of the fibres on the production belt as recited in claim 3.

The meaning of reoriented in relation to the depositing of the fibres, is as follows.

It is a decisive difference whether fibres are oriented such that a fraction of fibres is arranged in a direction of thickness (i.e. a vertical direction) in the manner of a lamellar board. Such kind of "orientation of fibres" is disclosed in Brandt et al. and improves, for example, pressure resistance. However, another fraction of such oriented fibres is horizontally oriented.

In contrast thereto, the fibres of amended claim 3 of the present invention are felted with one another and warped and also pressed against each other causing previously horizontal fibres or fibre fragments of the fibre alignment also to assume a vertical position resulting in the fact that nearly all

fibres are oriented in the same direction. This feature improves both strength and resistance of such a board and permits production of a thin board if necessary what is not possible with the teachings of Brandt et al.

Therefore, amended claim 3 is neither anticipated nor obvious from Brandt et al.

Further, regarding claims 4 and 5 the covering layer (claim 4), as well as the inner layer (claim 5) comprises a mineral wool product according to claim 3 that is connected with an insulating layer, wherein the type of treatment of the main layer (that is the insulating layer) is irrespective. Therefore, the covering layer as well as the inner layer are separate layers comprising the mineral wool product.

In contrast thereto, the insulating web mentioned in the Office Action, having a core (12) and a top layer (14) as shown in Fig. 10 of Brandt et al., is built as an integrally formed insulating web as it can be seen from Fig. 1.

Therefore, the top layer (14) is neither applicable to be used as an inner laver, nor applicable to be connected with various treated main lam, whereas it is possible to connect the inner layer as well as the covering layer comprising the mineral wool product as disclosed in the present application with nearly any main layer consisting of a plurality of various treated materials in order to achieve various applications.

Therefore, claims 4 and 5 are neither anticipated nor obvious from Brandt et al.

Regarding claims 6 - 16, the usage of the mineral wool product in the production of different products for various purposes as claimed within these claims is not known in the art. Moreover, an

ordinary skilled person could not gather any hint from the cited references nor from the known art that a mineral wool product could be used for applications as recited in these claims.

Especially, although Brandt et al. discloses a heat-insulating roofing plate having a top layer and a core as already discussed above, it is not disclosed, neither in Brandt et al. nor in any other prior art document that the mineral wool product is used as a covering layer of a roof-insulating board.

Further, none of the other applications claimed within claims 6 - 16, wherein the mineral wool product of the present invention is used as a part of a product is known from the cited references.

Thus, as apparent from the foregoing, the cited references taken alone or in combination fail to teach or suggest all the limitations of claim 3 of the present invention, namely, felting, warping, and pressing of the mineral fibres and the mineral fibres being arranged in a wavy manner and having length of up to 500 m.

It is therefore respectively submitted that independent claim 3 is allowable over the cited reference and that the rejection of independent claim 3 under 35 U.S.C. § 102(b)/103(a) should be withdrawn.

Moreover, as claims 4 - 16 each depend from claim 3, these claims are also believed to be allowable, and the rejection of claim 4 - 16 under 35 U.S.C. § 102(b)/103(a) should be withdrawn.

CONCLUSION

In light of the foregoing, Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application. Favorable action with an early allowance of the claims is earnestly solicited.

Respectfully submitted,

NATH & ASSOCIATES PLLC

May 4, 2005

NATH & ASSOCIATES PLLC
1030 15th Street, N.W.
6th Floor
Washington, D.C. 20005
Tel: (202) 775-8383
Fax: (202) 775-8396

Gary M. Nath
Reg. No. 26,965
Gregory B. Kang
Reg. No. 45,273
Teresa M. Arroyo
Reg. No. 50,015
Customer No. 20529